

REMARKS AND ARGUMENTS

Claim amendments

Claims 1 and 20 have been amended to define "An edible concentrate comprising a fat base consisting essentially of a mixture of enzymatically-prepared vegetable-derived triglycerides ". Claims 5, 6, 16, 17 and 20 are cancelled; new claims 21 and 22 have been added. Claims 2-4, 7, 10, 11, 13-15, 18 and 19 have been amended.

Support for this amendment may be found, for example, in Example 1, which describes the preparation of the mixture of vegetable-derived triglycerides (also defined as "fat concentrate" [0098], [also referred to as InFat].

Support for the amendment at the end of claim 1 may be found, for example, in paragraph [0060]. This amendment is further referred to below.

Support for the amendment to claim 15 may be found, for example, paragraph [0063].

The claims have also been amended to define the fat base mixture of claim 1 as "a concentrate". Support for this amendment may be found, for example, in paragraph [0083]: "The following Table 1 details the contents of the resulting fat base composition of the invention (InFat), also referred to as "the concentrate material".

New claims 21 and 22 have been added for the use of the invention as described in the specification.

Other formal amendments have been introduced, in response to the 35 USC 112 rejections which are now believed to be cured.

It is respectfully submitted that the amendments do not introduce any new matter.

Claim Rejections - 35 USC § 103

Previous Claims 1-4, 7-10, 13-15, 19 and 20 were rejected as unpatentable over US Patent No. 4,876,107 (King et al.) in view of Innis et al. (American Institute of Nutrition, 1995), both previously made of record, and further in view of Carroll (Journal of Nutrition, 1989).

Briefly, it was asserted that (2) King teaches an enzymatically prepared fat base composition being a mixture of vegetable-derived triglycerides since it teaches a substitute milk fat composition in the form of blends for infant formula, (2) King also

teaches fat base composition blend with total palmitic acid of at most 38% (Blend 3 in Table 3), (3) King further teaches that at least half of the fatty acids at sn-2 position are C16 and/or C18 saturated, particularly 60-90% of the sn-2 fatty acids (column 2 lines 25-29) and that 57% of the fatty acids at sn-2 are palmitic (Blend 3 Table 3), (4) King teaches that such arrangement results from the rearrangement of vegetable oil via enzymes (column 3 lines 20-25), therefore this is an enzymatically prepared fat base composition being a mixture of vegetable derived triglycerides.

As already submitted in the record, the fat compositions referred to by the Examiner are blends and not fat bases, which are concentrates to be blended or diluted with vegetable oils before their incorporation into a dietary ingredient, such as a fat component to be used as the fat source in infant formulas. Even if the blends are compared to the concentrate of claim 1, it can be readily seen that Blend 3 on which the Examiner relies does not have "at least 60% of the fatty acid residues at the sn-2 position of the glycerol backbone which are palmitic acid residues". Further, not even one of the other examples, be they fat samples (serving as the "concentrate") or blends, have all the limitations of amended claim 1 (a and b and c), namely (a) the total palmitic acid residues content is at most 38% of the total fatty acid residues; and (b) at least 60% of the fatty acid residues at the sn-2 position of the glycerol backbone are palmitic acid residues; and (c) 6-17% of the unsaturated fatty acid residues at the sn-1 and sn-3 positions are linoleic acid residues and/or 40-60% of the unsaturated fatty acid residues at the sn-1 and sn-3 positions are oleic acid residues. A Table summarizing all examples is of record in the response to the last Office Action. Further, Claim 1 has been amended to recite "a concentrate, which is to be blended or diluted with vegetable oil before incorporation into a dietary ingredient or a food product for human ingestion.

It is therefore respectfully submitted that presently presented amended claim 1 is not an obvious modification of the fat samples of King. Furthermore, the fat base of claim 1 is not even a modification of the oil-blended "blend" of King.

With regard to Innis, this document purported to teach that (1) palmitic acid in human milk represents 20-30% of the fatty acids and 70% of it is at the sn-2 position, and (2) that higher palmitic at sn-2 ensures high coefficient fat absorption, from which one of ordinary skill in the art would have been motivated by both King and Innis to develop a fat base composition for use in infant formulas that would approximate, the taught palmitic acid profile in the sn-2 position in order to provide a suitable substitute to human milk for infants, thereby allowing maximum fat absorption.

Applicant respectfully traverses.

Each of the blends of the cited art may be near to a part of the limitations of amended claim 1. However, not even one sample of a blend of the cited art complies with all of the limitations of amended claims 1, or is even close to all of them. Thus, even if the teachings of King and Innis were combined, the result would not be the concentrate of the present application.

It is acknowledged that King in view of Innis does not specifically teach a fat base in which 6-17% of the unsaturated fatty acid residues at the sn-1 and sn-3 positions are linoleic acid residues or 40-60% of the unsaturated fatty acid residues at the sn-1 and sn-3 positions are oleic acid residues, or both.

It is submitted that Carroll teaches recommendations for infant formula nutrients and teaches that the parent fatty acid of the n-6 is linoleic acid (page 1810, Col. 2, line 5), and teaches that the n-6 fatty acids should not exceed 20% of the total fatty acids or 10% the total energy in standard infant formulas (page 1811, Col. 1, line 19-21). It is further submitted that King teaches the desirability of having unsaturated fatty acids at the sn-1 and sn-3 positions, as detailed in the Office Action. Therefore, it is concluded that one of ordinary skill in the art would have reasonably expected to optimize and modify the amount of linoleic acid at the sn-1 and sn-3 positions in an infant formula composition, and that a level of 6-17% of linoleic acid residues at positions sn-1 and sn-3, out of the total unsaturated fatty acids in these positions would be obvious.

It is first to be noted that amended claim 1 defines a fat base concentrate and not a ready-for-direct-use as the fat ingredient in an existing infant formula. The inventive concentrate of amended claim 1 is only suitable for use after blending with other complementary vegetable oils, as defined in amended claim 1. Therefore, any indications of the limits or ranges of fatty acids in infant formula are not applicable or relevant to the fat base concentrate of the invention. Further, Carroll refers to the level of linoleic acid residues out of the total fatty acids, (including also unsaturated fatty acids at the sn-2 position and the saturated fatty acids in all three positions of the glycerol backbone). This has nothing to do, and cannot be correlated with the claimed concentrate in amended claim 1. Therefore, Carroll does not provide any teaching relevant to the concentrate of amended claim 1.

It is also asserted that King in view of Innis and Carroll teach that sn-1 and sn-3 include unsaturated fatty acids and further teach embodiments wherein at least 70% of the fatty acids at sn-1 and sn-3 are oleic acid residues and linoleic acid residues. Further, it is asserted that King in view of Innis and Carroll teach mixing fat base concentrate (>25%) with vegetable oils (10-20%) which fall in the range of amended claim 7.

Claim 7 depends from claim 1, and the above arguments apply with equal vigor. As already stated in the record, Carroll offers no teaching, suggestion or motivation regarding the lacks of King in view of Innis.

As the dependent claims.

Claims 11, 12 and 18 were also rejected under 35 USC 103(a) as obvious in view of King, Innis, Carroll p.1989 and further in view Cooper (US 5371253), previously made of record.

The references were addressed in the response to the last Office Action. As pointed out in the foregoing, also here, Carroll offers no teaching, suggestion or motivation regarding the lacks of the other references.

Cooper teaches steps for refining natural vegetable or animal oils, and is irrelevant to the preparation of the novel fat base **concentrate** of amended claim 1.

It is respectfully pointed out that a main object of the invention to provide a cost-effective **concentrate** for preparing fat blends that can be used as substitutes of human milk fat in infant foods, particularly formulas (e.g. page 9, line 6; page 21, paragraph 3 of the international publication).

The fat base **concentrates** of the present invention as defined in amended claim 1 can be used in relatively low amounts, to yield blends that are suitable as human milk fat substitutes. Infant formulas are produced for mass consumption. Keeping their cost reasonable for all sections of the population is important, however cost-effectiveness should not in any manner result in lower quality, and any potential damage to the consuming infant. It is this need that is answered by the present invention.

Examples of various InFat compositions are in the record presenting a calculation of the differences in costs of infant formulas and the advantage when using the **concentrate** of the present invention as defined in amended claim 1.

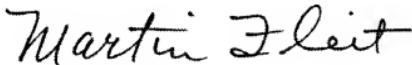
It is therefore respectfully submitted that the invention is not obvious over King in view of Innis or any tertiary reference singly or in any combination of references. Thus, reconsideration and withdrawal of the rejections are respectfully solicited and requested. In light of the foregoing remarks, this application should be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call

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Applicant(s): Mein-Bendek et al
Response to Office Action of September 27, 2010

to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

Further, it is respectfully requested that, if necessary to effect a timely response, this paper be considered as a Petition for an Extension of Time, time sufficient, to effect a timely response, and shortages in this or other fees, be charged, or any overpayment in fees be credited, to the Deposit Account of the undersigned, Account No. 500601
(Docket no. 7056-X08-021)

Respectfully submitted,



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